

University of Pretoria Yearbook 2025

Radiation therapy 701 (RSZ 701)

Qualification	Postgraduate
Faculty	Faculty of Health Sciences
Module credits	35.00
NQF Level	08
Programmes	BRadHons in Radiation Therapy
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 1 practical per week, 1 discussion class per week
Language of tuition	Module is presented in English
Department	Radiography
Period of presentation	Year

Module content

Part 1:

Clinical ethics and patient care and support in radiotherapy. Medico-legal aspects in radiation therapy. Radiotherapy assessment, patient care and support for patients receiving radiation therapy for tumours of the oral cavity, digestive tract, respiratory system, urinary system, nervous system, reproductive system, skin and blood. Management of patients receiving radiotherapy with co-existing medical conditions of anaemia, infection, ascites, pleural effusion, pain and neutropenia. Care of patients with tracheostomy, mastectomy, amputations and dental care. Radiobiological principles and concepts that underpin the interaction of radiation with cells, tissues, whole body. Tumour kinetics and tumour response to radiation. Carcinogenesis. Tumour micro-environment. Fractionation. Normal tissue responses of skin, oral mucosa, salivary glands, bone marrow, bone, cartilage, lung, kidney, testis, central nervous system and peripheral nervous tissue. Radiation effects on developing embryo. Hyperthermia. Basic principles of application of superficial x-ray, megavoltage x-ray, electron, neutron therapy, proton therapy, brachytherapy, intensity modulated radiotherapy and intra-operative radiotherapy. Basic radiotherapy treatment techniques in the treatment of malignant tumours of gynaecological, head and neck, skin, breast, genitourinary, gastrointestinal, lymphomas, leukemias, lung, mediastinum, bone, soft tissue, central nervous system and paediatric tumours. Radiotherapy treatment techniques for non-malignant tumours. Cancer biology and pathology. Epidemiology, prevention, early diagnosis and education. General principles in oncological management of the patient. Oncological principles related to the treatment of malignant tumours of different anatomical regions. Radiation oncology principles related to management of benign tumours, non-malignant medical conditions and oncological emergencies.

Part 2:

Basic management principles. Quality management. Brachytherapy. Treatment field conformation and treatment dose conformation in radiotherapy treatment delivery. Large field irradiation with photons and superficial photon therapy.

General Academic Regulations and Student Rules

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.